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Book Review

Electronic Medical Records: A Guide for Clinicians and Administrators. Jerome Carter, MD, American College of Physicians, 2001. 444 pp. ISBN 1-930513-01-1.

The Electronic Medical Record (EMR) has long been a central research focus of the field of clinical informatics. Some of the first large scale applications of computers to medicine in the 1960's were electronic computer-based patient record systems.[1] For much of the past four decades, however, deployment of these systems has been limited to a relatively small number of sites. In many cases the EMR systems at these sites were developed and deployed by academic informatics groups. In the early 1990s the Institute of Medicine published a landmark report on the computer-based patient record[2] that is credited by many with generating more widespread understanding of the potential advantages of the EMR. In the last several years there has been a steady increase in EMR deployment in US healthcare organizations. The release of the Institute of Medicine's report on medical errors,[3] and the potential for computer-based decision support systems to reduce such errors, has catalyzed significant additional interest in EMR deployment in the US. According to the 2002 HIMMS survey,[4] 13% of respondents had an EMR deployed, 32% were beginning deployment, and 23% had developed a plan to implement an EMR.

EMR deployment is a complex, expensive undertaking. Many organizations considering such deployment do not have access to expert informatics resources to guide the planning, selection, deployment, and assessment of these systems. Yet each successful deployment involves a journey along a path already traveled by others with knowledge and insights that would be of significant help to subsequent travelers. A new book edited by Jerome Carter, MD, published by the American College of Physicians-American Society of Internal Medicine (ACP-ASIM), offers a useful set of resources to those considering or beginning an EMR deployment project. The book, *Electronic Medical Records for Clinicians and Administrators*, contains 20 chapters by expert authors organized around the general themes of EMR technology infrastructure, workflow process, EMR project preparation, and systems implementation.

The infrastructure section of the book contains five chapters introducing topics such as computer hardware, operating systems, networking, and data repositories. Each is written with the intelligent beginner in mind. Complex concepts are introduced beginning with basics. For example, the chapter on computer hardware and enabling technologies introduces the reader to computer technologies, client–server systems, workstation types, and computer peripherals. It then moves on to more complex, but relevant topics, such as biometrics, video conferencing, and wireless networks. None of this is intended to create an expert but rather to provide the basic information and concepts that will allow the intelligent reader to understand and engage in the often confusing technical dialog that surrounds EMR planning and implementation.

The section on healthcare process contains four chapters that cover such topics as understanding the business and clinical care processes in healthcare, the EMR as a tool for research and patient care, and the role of the EMR in quality improvement. These chapters are well written and cover important concepts that are often neglected in EMR implementation projects.

The section on preparing for an EMR implementation project contains three chapters covering physician adoption strategies, legal issues and security, and confidentiality. The final section on EMR implementation consists of eight chapters organized as a set of work books dealing with important issues such as designing the EMR selection process, using consultants, creating a statement of requirements, feature evaluation, vendor analysis, creating a request for proposal, negotiating contracts, site visits, and implementation training. These chapters are well written and would be of particular use to those actually involved in the process of EMR planning, selection, and implementation. One could imagine this book being a very useful handbook for EMR selection committees.

Overall this book is a useful, timely compendium of knowledge and advice that will be invaluable to those not already familiar with EMR systems. Because of the introductory nature of the material covered, its audience

[1] Collen MJ. A History of Medical Informatics in the United States, 1950–1990. Amer Medical Informatics Assn; 1995.

[2] The Computer-Based Patient Record: An Essential Technology for Health Care. Institute of Medicine. National Academy Press; 1997.

[3] Kohn LT, Corrigan JM, Donaldson MS, editors. To Err Is Human: Building a Safer Health System. Institute of Medicine. National Academy Press; 2000.

[4] http://www.himss.org/2002Survey/.

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is clinicians and administrators who are interested in or are involved in EMR deployment projects. Each chapter in the book contains references to additional published material. There is no feature comparison or discussion of the available commercial EMR systems. While many readers might find this useful, the time-limited nature of such information is really not appropriate for a book that will be a valuable resource over the next few years, independent of how some features change across various vendor systems.

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